



الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري

Arab Academy for Science, Technology & Maritime Transport

COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER ENGINEERING

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Lab 3
Stream Sockets (Multiple Clients)

Multi-threaded Stream Sockets

Listing 1: Server.java

```
1 import java.net.*;
2 import java.io.*;
3
4 public class Server{
5     public static void main(String[] args){
6         int port = 8000;
7         try{
8             ServerSocket server = new ServerSocket(port);
9             while(true){
10                Socket client = server.accept();
11                MyThread thread = new MyThread(client);
12                thread.start();
13            }
14        }catch(Exception ex){
15            System.out.println(ex);
16        }
17    }
18 }
19
20 class MyThread extends Thread{
21     Socket client;
22     MyThread(Socket c){
23         client = c;
24     }
25     public void run(){
26         InetAddress inet = client.getInetAddress();
27         System.out.println("Client hostname: " + inet.getHostName());
28         System.out.println("Client IP: " + inet.getHostAddress());
29         try{
30             DataInputStream in = new DataInputStream(client.getInputStream());
31             DataOutputStream out = new DataOutputStream(client.getOutputStream());
32             out.writeUTF("Message from the server");
33             System.out.println(in.readUTF());
34         }catch(IOException ex){
```

```
35         System.out.println(ex);
36     }
37 }
38 }
```

Assignment 1

1. Write a code for the time server, the time server should wait for a client, then once connected the server sends the current date and time to the client.
(**Hint:** make use of the `java.util.Calendar` class)
2. Write a client/server chat program, using the stream sockets, and make use of the java GUI classes through the **javax** package.